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SPECIAL INSTRUCTIONS:

Galileo PPR Observations of Shoemaker-Levy 9

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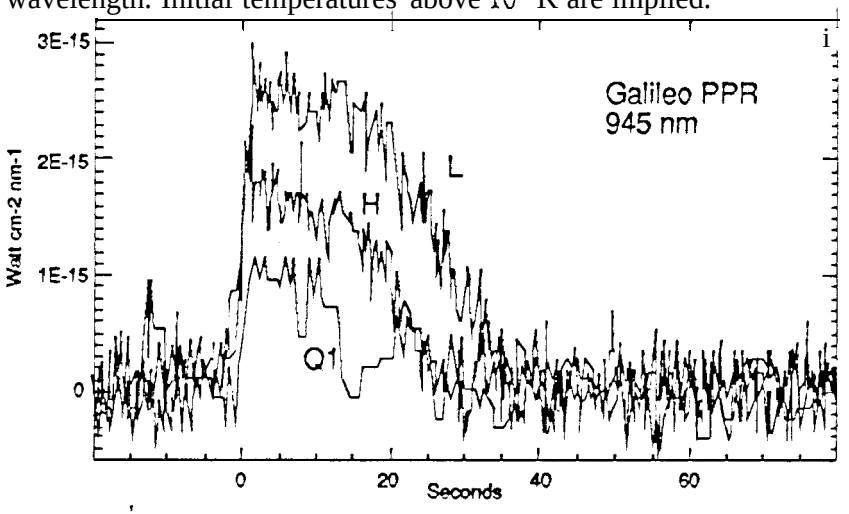
The Galileo spacecraft Photopolarimeter Radiometer (PPR), a hybrid visual/thermal IR instrument designed primarily to measure properties of the Jovian atmosphere, was employed for SL9 as a staring high-speed photometer at 945 and 678 nm, taking advantage of Galileo's direct view of the impact point. Jupiter subtended 0.6 mrad within the 2.5 mrad circular field of view. The PPR was able to acquire data at times when no other Galileo optical instruments could operate. The impacts of fragments B, H, L, Q 1, and S were observed for 41 m each with a sample time of 0.23 sec. The H, L, and Q1 events provided good light curve and timing information. Initial flashes occurred at these times (for earthbased observers):

H:	1994/ 199 19:31:58	UTC
L	1994 / 20022:16:48	
Q1:	1994/201 20:13:52	

These data likely represent thermal emission from the brief initial pass of comet fragments through the atmosphere, followed immediately by an expanding and cooling "fireball". The Q 1 flash appeared 3x brighter at 678 nm than at 945 nm, with a faster decay at the shorter wavelength. Initial temperatures above 10^4 K are implied.



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